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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,201	04/09/2004	Siddhartha Panda	071469-0309182	8235

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PILLSBURY WINTHROP SHAW PITTMAN, LLP  
P.O. BOX 10500  
MCLEAN, VA 22102

EXAMINER
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GOUDREAU, GEORGE A

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/821,201	<b>Applicant(s)</b> PANDA ET AL.	
	<b>Examiner</b> George A. Goudreau	<b>Art Unit</b> 1763	_____

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

*George A. Goudreau*  
**GEORGE GOUDREAU**  
**PRIMARY EXAMINER**  
3-06

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. Applicant's election with traverse of the apparatus claims in the reply filed on 12-15-05' is acknowledged. The traversal is on the ground(s) that there is no serious burden placed upon the examiner by requiring the examiner to examine both the method claims, and the apparatus claims. Also, the examiner has failed to meet one of the two requirements for a proper restriction requirement to be made. That is, the examiner has failed to show that the same search which is required for the method claims is not required for the apparatus claims. This is not found persuasive because of the following. The method claims require searches in class 438, and class 216. The apparatus claims require searches in class 156, and class 118. The search required for the method claims does not overlap the search, which is required for the apparatus claims, contrary to what applicant purports. Thus, the examiner has properly met both requirements for a proper restriction requirement to be made contrary to what applicant argues.

The requirement is still deemed proper and is therefore made FINAL.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 9-11, and 13-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Mimura et. al. (WO-02/23,609).

Mimura et. al. disclose a parallel plate mrie etching apparatus which is equipped with means for forming a magnetic field with a field strength of (100-1,000) gauss. The

magnetic field strength is preferably 100 gauss. The apparatus is equipped with means for admitting a multitude of different gasses through a showerhead (20) in the anode electrode (1). The substrate is electrostatically held on a cathode electrode, which is, biased with two RF power sources. The first power source (15) used to bias the cathode (2) has a frequency of (40-200) MHz. The second power source used to bias the cathode electrode has a frequency of 2 MHz or more. This is discussed specifically in the abstract; and discussed in general on pages 1-27. This is shown in figures 1-9.

In regards to the process limitations, which are recited by the applicant in their system (i.e.-apparatus) claims, the examiner cites the case law listed below of interest to the applicant in this regard.

Furthermore, it is obvious to one skilled in the art that the configuration of the substrate worked upon by the apparatus claimed in this invention is not patentable in view of In re Young (25 U.S.P.Q. 69, 71 (CCPA 1935)) and In re Rishoi (94 U.S.P.Q. 71,73 (CCPA 1952)). The Court of Customs and Patent Appeals stated in In re Young that inclusion of material worked upon by a machine as element in claim may not lend patentability since claim is not otherwise allowable. Similarly, the Court of Customs and Patent Appeals stated in In re Rishoi that there is no patentable combination between a device and the material upon which it works.

Thus, it is irrelevant that the apparatus, which is taught above, does not specifically teach the etching process which is claimed by the applicant in their apparatus claims since the apparatus, which is taught above, is inherently capable of conducting such an etching process. The examiner cites the case law listed below of

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interested to the applicant in this regard.

In re Swinehart (169 U.S.P.Q. 226 (CCPA )) and In re Best (195 U.S.P.Q. 430 (CCPA )) state that when an examiner has reasonable basis for believing that functional characteristics asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be inherent characteristics of the prior art, the examiner possesses the authority to require an applicant to prove that the subject matter shown to be in the prior art does not possess the characteristics relied upon.

Thus, all of applicant's claimed limitations are fully met in this regard.

4. Claims 9-16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kojima et. al. (6,433,297).

See search report.

5. Claims 9-16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Yin et. al. (6,379,575).

See search report.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over the reference as applied in paragraph 3 above.

The reference as applied in paragraph 3 above fail to disclose the specific usage of a frequency of 3.2 for the second power source used to bias the cathode electrode.

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It would have been prima facie obvious to employ any of a variety of different etch process parameters in the etching process which is taught above including those which are specifically claimed by the applicant. These are all well-known variables in the plasma etching art, which are known to effect both the rate and the quality of the plasma etching process. Further, the selection of particular values for these variables would not necessitate any undue experimentation, which would have been indicative of unexpected results.


Alternatively, it would have been obvious to one skilled in the art to employ the specific etch process parameters which are claimed by the applicant in the etching process which is taught above based upon *In re Aller* as cited below.

Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. ≡ In re Aller, 220 F. 2d 454, 105 USPQ 233, 235 (CCPA).

Further, all of the specific process parameters, which are claimed by the applicant are results effective variables whose values are known to effect both the rate, and the quality of the plasma etching process.

8. Any inquiry concerning this communication should be directed to examiner

George A. Goudreau at telephone number (571)-272-1434.

  
George A. Goudreau  
Primary Examiner  
Art Unit 1763